

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of:

Chen, et al.

Serial No.: 10/741,824

Confirmation No.: Unknown

Filed:

December 19, 2003

For:

Enhancement of CU Line Reliability Using Thin ALD

Tan Film to Cap the CU

Line

Group Art Unit: Unknown

Examiner:

Unknown

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

CERTIFICATE OF MAILING 37 CFR 1.8

I hereby certify that this correspondence is being deposited on 3/22, 2004 with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-145Q.

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INFORMATION DISCLOSURE STATEMENT

The Applicants, and the Attorney who signs below on the basis of the information supplied by the inventor and the information in his file, submit herewith patents, publications, or other information of which they are aware, which may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56.

While the information submitted in this Information Disclosure Statement may be material pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication, or other information referred to therein is prior art for this invention unless specifically designated as such.

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The patents and/or publications submitted herewith are set forth on the attached Form PTO-1449.

If the sum of \$180.00 is due under 37 CFR § 1.17(p) pursuant to § 1.97, the Commissioner is hereby authorized to charge this fee, and any other fee necessary to make this submission timely, to the Deposit Account No.20-0782/AMAT/7532/KMT.

Respectfully submitted,

Keith M. Tackett

Registration No. 32,008

MOSER, PATTERSON & SHERIDAN, L.L.P.

3040 Post Oak Blvd. Suite 1500

Houston, TX 77056

Telephone: (713) 623-4844 Facsimile: (713) 623-4846

Please type a plus sign (+) inside this box PTO/SB/08a (08-03) Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Reduction Act of 1995, no persons are required to ormation unless it displays a valid OMB control number 10/741.824 MAR ubstitute for for 2004 1449A/PTO **Application Number** INFORMATION DISCLUSE...
STATEMENT BY APPLICANT **DECEMBER 19, 2003** Filing Date First Named Inventor LING CHEN, ET AL. Group Art Unit UNKNOWN UNKNOWN **Examiner Name** Attorney Docket Number AMAT/7532/CPI/L/B/PJS Sheet Submission Date March 22, 2004

	U.S. PATENT DOCUMENTS							
Examiner Cit		Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where			
Initials*	No. ¹	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear			
	A1	US-20030205729 A1	11/06/2003	Basceri, et al.				
4	A2	US-20030186495 A1	10/02/2003	Saanila, et al.				
	A3	US-20030173586 A1	09/18/2003	Henderson				
	A4	US-20030168750 A1	09/11/2003	Basceri, et al.				
	A5	US-20030165615 A1	09/04/2003	Aaltonen, et al.				
	A6	US-20030143841 A1	07/31/2003	Yang, et al.				
	A7	US-20030143839 A1	07/31/2003	Jones, et al.				
	A8	US-20030134508 A1	07/17/2003	Raaijmakers, et al.				
	A9	US-20030129826 A1	07/10/2003	Werkhoven, et al.				
	A10	US-20030104126 A1	06/05/2003	Fang, et al.				
	A11	US-20030101927 A1	06/05/2003	Raaijmakers				
	A12	US-20030089308 A1	05/15/2003	Raaijmakers	,			
	A13	US-20030082300 A1	05/01/2003	Todd, et al.				
	A14	US-20030082296 A1	05/01/2003	Elers, et al.				
	A15	US-20030079686 A1	05/01/2003	Chen, et al.				
	A16	US-20030072975 A1	04/17/2003	Shero, et al.				
	A17	US-20030054631 A1	03/20/2003	Raaijmakers, et al.				
	A18	US-20030049942 A1	03/13/2003	Haukka, et al.				

	FOREIGN PATENT DOCUMENTS									
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T⁵				
Initials*	No.'			Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	·				
	B1	EP 1 170 804 A2 /	01/09/2002		·	X				
	B2	EP 1 167 569 A1	01/02/2002							
	В3	EP 1 146 141 A2 🗸	10/17/2001							
	B4	EP 0 442 490 A1 V	02/14/1991							
	B5	EP 0 429 270 A2	05/29/1991							

Examiner Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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First Named Inventor	LING CHEN, ET AL.
Group Art Unit	UNKNOWN
Examiner Name	UNKNOWN
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Submission Date	

	U.S. PATENT DOCUMENTS								
Examiner Cite		Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant				
mado		Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear				
	A19	US-20030042630 A1	03/06/2003	Babcoke, et al.					
	A20	US-20030032281 A1	02/13/2003	Werkhoven, et al.					
	A21	US-20030031807 A1	02/13/2003	Elers, et al.					
	A22	US-20030013320 A1	01/16/2003	Kim, et al.					
·	A23	US-20030013300 A1	01/16/2003	Byun					
	A24	US-20020197402 A1	12/26/2002	Chiang, et al.	·				
	A25	US-20020187631 A1	12/12/2002	Kim, et al.					
	A26	US-20020187256 A1	12/12/2002	Elers, et al.	0				
	A27	US-20020182320 A1	12/05/2002	Leskela, et al.	*				
	A28	US-20020177282 A1	11/28/2002	Song					
	A29	US-20020164423 A1	11/07/2002	Chiang, et al.					
	A30	US-20020164421 A1	11/07/2002	Chiang, et al.	·				
	A31	US-20020162506 A1	11/07/2002	Sneh, et al.					
	·A32	US-20020155722 A1	10/24/2002	Satta, et al.					
	A33	US-20020153579 A1	10/24/2002	Yamamoto .					
	A34	US-20020151152 A1	10/17/2002	Shimamoto, et al.					
	A35	US-20020146895 A1	10/10/2002	Ramdani, et al.					
	A36	US-20020146511 A1	10/10/2002	Chiang, et al.					

	FOREIGN PATENT DOCUMENTS									
Examiner Cit		Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T ⁶				
Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear					
	В6	EP 0 344 352 A1 ✔	06/03/1988							
	В7	EP 0 799 641 A2	10/08/1997		0					
	B8	DE 198 20 147A1	07/01/1999							
	В9	DE 196 27 017A1 🗸	01/09/1997							
	B10	CN 1 319 891 (Eng. Abstract Only) 🗸	11/09/2001			X				

Examiner **Date Considered**

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. Substitute for form 449A/PTO 10/741,824 **Application Number DECEMBER 19, 2003** Filing Date MAR 2 6 2004 NFORMA≸ION DISCLOSURE First Named Inventor LING CHEN, ET AL. NÊNT BY APPLICANT Group Art Unit UNKNOWN **Examiner Name** UNKNOWN (Use as many sheets as necessary) AMAT/7532/CPI/L/B/PJS Attorney Docket Number

Submission Date

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U.S. PATENT DOCUMENTS								
Examiner Cité		Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where			
Initials*	No. ¹	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY Applicant of Cited Documer	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear			
	A37	US-20020144657 A1	10/10/2002	Chiang, et al.				
	A38	US-20020144655 A1	10/10/2002	Chiang, et al.				
	A39	US-20020135071 A1	09/26/2002	Kang, et al.				
	A40	US-20020121697 A1	09/05/2002	Marsh				
	A41	US-20020121342 A1	09/05/2002	Nguyen, et al.				
	A42	US-20020121241 A1	09/05/2002	Nguyen, et al.				
	A43	US-20020117399 A1	08/29/2002	Chen, et al.				
	A44	US-20020109168 A1	08/15/2002	Kim, et al.				
	A45	US-20020106846 A1	08/08/2002	Seutter, et al.				
	A46	US-20020106536 A1	08/08/2002	Lee, et al.				
	· A47	US-20020106536 A1	08/08/2002	Lee, et al.				
	A48	US-20020105088 A1	08/08/2002	Yang, et al.				
	A49	US-20020104481 A1	08/08/2002	Chiang, et al.				
	A50	US-20020102840 A1	08/01/2002	Tsai, et al.				
	· A51	US-20020102834 A1	08/01/2002	Yang, et al.				
	A52	US-20020098627 A1	07/25/2002	Pomarede, et al.				
	A53	US-20020096775 A1	07/25/2002	Ning				
	A54	US-20020094689 A1	07/18/2002	Park				

		FORE	IGN PATENT I	DOCUMENTS		
Examiner	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines,	T⁵
Initials*		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY		Where Relevant Passages or Relevant Figures Appear	
	B11	TW 430970 (Eng. Abstract Only) 🗸	04/21/2001	**		Х
	B12	FR 2 692 597 A1	12/24/1993			
	B13	FR 2 626 110 A1	07/21/1989	-8		
	B14	GB 2365215	02/13/2002			
	B15	GB 2 355 727A	05/02/2001	•		

Examiner Date Considered

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. 10/741,824 **Application Number** Substitute for form 1449A/PTO MAR 2 6 2004 . Filing Date **DECEMBER 19, 2003** INFORMATION DISCLOSSING INFORMATION DISCLOSSING First Named Inventor LING CHEN, ET AL. Group Art Unit UNKNOWN **Examiner Name UNKNOWN** (Use as many sheets as necessary) Attorney Docket Number AMAT/7532/CPI/L/B/PJS

Submission Date

U.S. PATENT DOCUMENTS								
Examiner Cit		Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where			
Initials*	No. ¹	Number-Kind Code ^{2 (d known)}	MM-DD-YYYY Applicant of Cited Document	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear			
	A55	US-20020093781 A1	07/18/2002	Bachhofer, et al.				
	A56	US-20020093046 A1	07/18/2002	Moriya, et al.				
	A57	US-20020090829 A1	07/11/2002	Sandhu, et al.				
	A58	US-20020086507 A1	07/04/2002	Park, et al.				
	A59	US-20020086111 A1	07/04/2002	Byun, et al.				
	A60	US-20020081844 A1	06/27/2002	Jeon, et al.	·			
	A61	US-20020081826 A1	06/27/2002	Rotondaro, et al.				
	A62	US-20020076837 A1	06/20/2002	Hujanen, et al.	•			
	A63	US-20020076508 A1	06/20/2002	Chiang, et al.				
	A64	US-20020076507 A1	06/20/2002	Chiang, et al.				
	A65	US-20020076481 A1	06/20/2002	Chiang, et al.				
	A66	US-20020074588 A1	06/20/2002	Lee, et al.				
·	A67	US-20020073924 A1	06/20/2002	Chiang, et al.				
	A68	US-20020068458 A1	06/06/2002	Chiang, et al.				
	A69	US-20020064970 A1	05/30/2002	Chooi, et al.				
	A70	US-20020061612 A1	05/23/2002	Sandhu, et al.				
	A71	US-20020061612	05/23/2002	Sandhu, et al.				
	A72	US-20020055235 A1	05/09/2002	Agarwal, et al.				

	FOREIGN PATENT DOCUMENTS									
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T ⁶				
Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear					
	B16	JP 64-090524	04/07/1989		·					
	B17	JP 64-082676 (Eng. Abstract Only)	03/28/1989			X				
	B18	JP 64-082671 (Eng. Abstract Only) 🕏	03/28/1989			Х				
	B19	JP 64-082617 (Eng. Abstract Only) 🗸	03/28/1989			Х				
	B20	JP 64-082615 (Eng. Abstract Only) 🗸	03/28/1989	·		Х				

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Application Number

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INFORMATION DISCLOSURE

STATEMENT BY APPLICANT

Filing Date DECEMBER 19, 2003

First Named Inventor LING CHEN, ET AL.

Group Art Unit UNKNOWN

Examiner Name UNKNOWN

Attorney Docket Number AMAT/7532/CPI/L/B/PJS

(Use as many sheets as necessary)

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U.S. PATENT DOCUMENTS								
	Cite No.1	. Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant			
miliais	· No.	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear			
	A73	US-20020052097 A1	05/02/2002	Park				
	A74	US-20020048880 A1	04/25/2002	Lee				
	A75	US-20020048635 A1	04/25/202	Kim, et al.				
	A76	US-20020043666 A1	04/18/2002	Parsons, et al.				
	A77	US-20020041931 A1	04/11/2002	Suntola, et al.				
	A78	US-20020037630 A1	03/28/2002	Agarwal, et al.	·			
	A79	US-20020031618 A1	03/14/2002	Sherman				
	A80	US-20020029092 A1	03/07/2002	Gass				
	A81	US-20020021544 A1	02/21/2002	Cho, et al.				
	A82	US-20020020869 A1	02/21/2002	Park, et al.				
	A83	US-20020019121 A1	02/14/2002	Pyo				
	A84	US-20020015790 A1	02/07/2002	Baum, et al.				
	A85	US-20020014647 A1	02/07/2002	Seidl, et al.				
	A86	US-20020008297 A1	01/24/2002	Park, et al.				
	A87	US-20020007790 A1	01/24/2002	Park				
	A88	US-20020005556 A1	01/17/2002	Cartier, et al.				
	A89	US-20020004293 A1	01/10/2002	Soininen, et al.				
	A90	US-20020003403 A1	01/10/2002	Ghosh, et al.	."			

Submission Date

	FOREIGN PATENT DOCUMENTS									
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T ⁶				
Initials*	No.1	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear					
	B21	JP 64-037832 (Eng. Abstract Only)	02/08/1989	·		Х				
	B22	JP 64-009897 (Eng. Abstract Only)	01/13/1989			X				
	B23	JP 64-009896 (Eng. Abstract Only) /	01/13/1989			Х				
	B24	JP 64-009895 (Eng. Abstract Only)	01/13/1989			Х				
	B25	JP 63-266814 (Eng. Abstract Only)	11/02/1988			Х				

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PTO/\$B/08a (08-03)

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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INFO	RMATION DISC	LOS	SURE	First Named Inventor	LING CHEN, ET AL.
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			U.S. PATENT	DOCUMENTS	·
Examiner Initials*	Cite No.1	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant
		Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear
	A91	US-20020000598 A1	01/03/2002	Kang, et al.	•
	A92	US-20010054769 A1	12/27/2001	Raaijmakers, et al.	
	A93	US-20010054730 A1	12/27/2001	Kim, et al.	
	A94	US-20010052752 A1	12/20/2001	Ghosh, et al.	
	A95	US-20010050039 A1	12/13/2001	Park	·
	A96	US-20010041250 A1	11/15/2001	Werkhoven, et al.	
	A97	US-20010034123 A1	10/25/2001	Jeon, et al.	
	A98	US-20010031562 A1	10/18/2001	Raaijmakers, et al.	
•	A99	US-20010029891 A1	10/18/2001	Oh, et al.	
	A100	US-20010029094 A1	10/11/2001	Mee-Young, et al.	
	A101	US-20010028924 A1	10/11/2001	Sherman	
	A102	US-20010025979 A1	10/04/2001	Kim, et al.	
	A103	US-20010024387 A1	09/27/2001	Raaijmakers, et al.	
	A104	US-20010021589 A1	09/13/2001	Wilk .	
_	A105	US-20010011526 A1	08/09/2001	Doering, et al.	
•	A106	US-20010009695 A1	07/26/2001	Saanila, et al.	
	A107	US-20010009140 A1	07/26/2001	Bondestam, et al.	
	A108	US-20010002280 A1	05/31/2001	Sneh	

	FOREIGN PATENT DOCUMENTS							
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T ⁶		
Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear			
	B26	JP 63-252420 (Eng. Abstract Only)	10/19/1988			Х		
	B27	JP 63-227007 (Eng. Abstract Only)	09/21/1988			Х		
	B28	JP 63-222421 (Eng. Abstract Only)	09/16/1988			X		
	B29	JP 63-222420 (Eng. Abstract Only)	09/16/1988			Х		
	B30	JP 63-090833 (Eng. Abstract Only) 🗸	04/21/1988			Х		

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STAT	TEMENT BY AP	PLIC	CANT	Group Art Unit	UNKNOWN	T
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			U.S. PATENT	DOCUMENTS		
Examiner Initials*	Cite No.1	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	
IIIIIIIII	Number-Kind Code ^{2 (f known)}		MM-DD-YYYY	Applicant of Cited Document	Figures Appear	
	A109	US-20010000866 A1	05/10/2001	Sneh, et al.		
	A110	US-6,686,271 B2	02/03/2004	Raaijmakers, et al.		
	A111	US-6,660,126 B2	12/09/2003	Nguyen, et al.		
	A112	US-6,632,279 B1	10/14/2003	Ritala, et al.		
	A113	US-6,620,723 B1	09/16/2003	Byun, et al.		
	A114	US-6,607,976 B2	08/19/2003	Chen, et al.		
	A115	US-6,599,572 B2	07/29/2003	Saanila, et al.		
	A116	US-6,585,823 B1	07/01/2003	Van Wijck		
•	A117	US-6,548,424 B2	04/15/2003	Putkonen		
	A118	US-6,534,395 B2	03/18/2003	Werkhoven, et al.		
	A119	US-6,511,539 B1	01/28/2003	Raaijmakers, et al.		
-	A120	US-6,482,740 B2	11/19/2002	Soininen, et al.	·	
	A121	US-6,482,733 B2	11/19/2002	Raaijmakers, et al.		
	A122	US-6,482,262 B1	11/19/2002	Elers, et al.		
	A123	US-6,478,872 B1	11/12/2002	Chae, et al.		
	A124	US-6,475,910 B1	11/05/2002	Sneh		
	A125	US-6,475,276 B1	11/05/2002	Elers, et al.		
	A126	US-6,468,924 B2	10/22/2002	Lee, et al.		

			FORE	IGN PATENT [DOCUMENTS		
١	Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T⁵
	Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	
Ī		B31	JP 63-085098 (Eng. Abstract Only)	04/15/1988			X
		B32	JP 63-062313 (Eng. Abstract Only) 🗸	03/18/1988		·	X
İ		B33	JP 62-232919 (Eng. Abstract Only)	10/13/1987			Х
Ī		B34	JP 62-171999 (Eng. Abstract Only) 🗸	07/28/1987			X
		B35	JP 62-167297 (Eng. Abstract Only) 🗸	07/23/1987			Х

Date Considered Examiner

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Substitute	for form 1449A/PTO			Application Number	10/741,824
				Filing Date	DECEMBER 19, 2003
INFO	RMATION DISC	CLOS	SURE	First Named Inventor	LING CHEN, ET AL.
STAT	TEMENT BY AP	PLIC	CANT	Group Art Unit	UNKNOWN
				Examiner Name	UNKNOWN
(Use as many sheets as necessary)				Attorney Docket Number	AMAT/7532/CPI/L/B/PJS
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			U.S. PATENT	DOCUMENTS	
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No. ¹	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
-	A127	US-6,458,701 B1	10/01/2002	Chae, et al.	
	A128	US-6,452,229 B1	09/17/2002	Krivokapic	
	A129	US-6,451,695 B2	09/17/2002	Sneh	
	A130	US-6,451,119 B2	09/17/2002	Sneh, et al.	
	A131	US-6,447,933 B1	09/10/2002	Wang, et al.	
	A132	US-6,428,859 B1	08/06/2002	Chiang, et al.	
	A133	US-6,426,555 B1	07/30/2002	Hsia	
	A134	US-6,423,619 B1	07/23/2002	Grant, et al.	
	A135	US-6,420,279 B1	07/16/2002	Ono, et al.	
	A136	US-6,420,189 B1	07/16/2002	Lopatin	
	A137	US-6,416,822 B1	07/09/2002	Chiang, et al.	
	A138	US-6,416,577 B1	07/09/2002	Suntoloa, et al.	
	A139	US-6,399,491 B2	06/04/2002	Jeon, et al.	
	A140	US-6,395,650 B1	05/28/2002	Callegari, et al.	
	A141	US-6,391,803 B1	05/21/2002	Kim, et al.	
	A142	US-6,391,785 B1	05/21/2002	Satta, et al.	
	A143	US-6,380,084 B1	04/30/2002	Lim, et al.	
	A144	US-6,379,748 B1	04/30/2002	Bhandari, et al.	

		FORE	IGN PATENT [DOCUMENTS		
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T⁵
Initials*	No.	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	
	B36	JP 62-141717 (Eng. Abstract Only) 🗸	06/25/1987			Х
	B37	JP 62-091495 (w/Eng. Abstract)	04/25/1987			Х
	B38	JP 62-069508 (Eng. Abstract Only) /	03/30/1987			Х
	B39	JP 61-210623 (Eng. Abstract Only) 🗸	09/18/1986			Х
	B40	JP 61-035847 (Eng. Abstract Only) 🗸	02/20/1986	_		X

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. sKind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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	•	•		Filing Date	DECEMBER 19, 2003
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STAT	TEMENT BY AP	PLIC	CANT	Group Art Unit	UNKNOWN
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		•	U.S. PATENT	DOCUMENTS	
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No.1	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
	A145	US-6,376,353 B1	04/23/2002	Zhou, et al.	
	A146	US-6,372,598 B2	04/16/2002	Kang, et al.	
	A147	US-6,369,430 B1	04/09/2002	Adetutu, et al.	
•	A148	US-6,368,954 B1	04/09/2002	Lopatin, et al.	
	A149	US-6,358,829 B2	03/19/2002	Yoon, et al.	
	A150	US-6,355,561 B1	03/12/2002	Sandhu, et al.	
. •	A151	US-6,348,386 B1	02/19/2002	Gilmer	
	A152	US-6,348,376 B2	02/19/2002	Lim, et al.	
•	A153	US-6,342,277 B1	01/29/2002	Sherman	
	A154	US-6,335,280 B1	01/01/2002	Van der Jeugh	
	A155	US-6,333,260 B1	12/25/2001	Kwon, et al.	
	A156	US-6,316,098 B1	11/13/2001	Yitzchaik, et al.	
	A157	US-6,306,216 B1	10/23/2001	Kim, et al.	
	A158	US-6,305,314 B1	10/23/2001	Sneh, et al.	
	A159	US-6,299,294 B1	10/09/2001	Regan	
	A160	US-6,291,876 B1	09/18/2001	Stumborg, et al.	
	A161	US-6,291,283 B1	09/18/2001	Wilk · .	
•	A162	US-6,287,965 B1	09/11/2001	Kang, et al.	

		FORE	IGN PATENT I	DOCUMENTS	•	
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	L _e
Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	
	B41	JP 60-065712A	04/15/1985			
	B42	JP 58-100419 (Eng. Abstract Only) /	06/15/1983			Х
	B43	JP 58-098917 (Eng. Abstract Only) 🎸	06/13/1983			Х
	B44	JP 2002-93804 (w/Eng. Abstract)	03/29/2002	*		X
	B45	JP 2002-69641 (w/Eng. Abstract) 🗸	03/08/2002		*	X

Date Considered Examiner

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. skind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language Translation is attached.

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Under the Paperwork Reduction Act of 1995, no p rsons are required to respond to a collection of information unless it displays a valid OMB control number. 10/741,824 **Application Number** Substitute for form 1449A/PTO Filing Date **DECEMBER 19, 2003** INFORMATION DISCLOSURE First Named Inventor LING CHEN, ET AL. STATEMENT BY APPLICANT Group Art Unit UNKNOWN **Examiner Name UNKNOWN** (Use as many sheets as necessary) AMAT/7532/CPI/L/B/PJS Attorney Docket Number

Submission Date

U.S. PATENT DOCUMENTS							
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where		
Initials*	No. ¹	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear		
•	A163	US-6,284,646 B1	09/04/2001	Leem			
	A164	US-6,271,148 B1	08/07/2001	Kao et al.			
	A165	US-6,270,572 B1	08/07/2001	Kim, et al.			
	A166	US-6,258,713 B1	07/10/2001	Yu, et al.			
	A167	US-6,248,605 B1	06/19/2001	Harkonen, et al.			
	A168	US-6,238,734 B1	05/29/2001	Senzaki, et al.			
	A169	US-6,218,298 B1	04/17/2001	Hoinkis			
	A170	US-6,207,487 B1	03/27/2001	Kim, et al.			
	A171	US-6,207,302 B1	03/27/2001	Sugiura, et al.			
	A172	US-6,206,967 B1	03/27/2001	Mak, et al.			
	A173	US-6,203,613 B1	03/20/2001	Gates, et al.			
	A174	US-6,200,893 B1	03/13/2001	Sneh			
	A175	US-6,197,683 B1	03/06/2001	Kang, et al.	·		
	A176	US-6,197,678 B1	03/06/2001	Yu			
	A177	US-6,174,812 B1	01/16/2001	Hsiung, et al.			
	A178	US-6,174,809 B1	01/16/2001	Kang, et al.			
	A179	US-6,174,377 B1	01/16/2001	Doering, et al.			
	A180	US-6,169,028 B1	01/02/2001	Wang, et al.			

	FOREIGN PATENT DOCUMENTS							
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T€		
Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY					
	B46	JP 2002-60944 (w/Eng. Abstract)	02/28/2002			X		
	B47	JP 2002-172767 (w/Eng. Abstract) 🗸	06/18/2002		٠.	Х		
	B48	JP 2002-167672 (w/Eng. Abstract) /	06/11/2002			Х		
	B49	JP 2001-62244	03/13/2001		·	X		
	B50	JP 2001-328900 (w/Eng. Abstract)	11/27/2001	-		Х		

Examiner Date Considered

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Substitute	for form 1449A/PTO			Application Number	10/741,824	1
				Filing Date	DECEMBER 19, 2003	
INFO	RMATION DISC	LOS	SURE	First Named Inventor	LING CHEN, ET AL.	Т
STAT	FEMENT BY AP	PLIC	CANT	Group Art Unit	UNKNOWN	T
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			U.S. PATENT	DOCUMENTS		
Examiner (Cite No.1	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	
imuais	NO.	Number-Kind Code ^{2 (f known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	
	A181	US-6,158,446	12/12/2000	Mohindra et al.		
	A182	US-6,144,060	11/07/2000	Park et al.		
	A183	US-6,143,659	11/07/2000	Leem		
	A184	US-6,140,238	10/31/2000	Kitch		
	A185	US-6,140,237	10/31/2000	Chan et al.		
	A186	US-6,139,700	10/31/2000	Kang et al.		
	A187	US-6,130,147	10/10/2000	Major et al.		
 	A188	US-6,124,158	09/26/2000	Dautartas et al.		
•	A189	US-6,117,244	09/12/2000	Bang, et al.		
	A190	US-6,113,977	09/05/2000	Soininen et al.		
	A191	US-6,113,771	09/05/2000	Landau, et al.		
	A192	US-6,110,556	08/29/2000	Bang, et al.		
	A193	US-6,086,677	07/11/2000	Umotoy et al.		
	A194	US-6,084,302	07/04/2000	Sandhu		
	A195	US-6,071,808	06/06/2000	Merchant et al.		
	A196	US-6,062,798	05/16/2000	Muka		
	A197	US-6,051,286	04/18/2000	Zhao et al.		
	A198	US-6,043,177	03/28/2000	Falconer et al.		

	FOREIGN PATENT DOCUMENTS								
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T€			
Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY						
	B51	JP 2001-313296 (w/Eng. Abstract)	11/09/2001			Х			
	B52	JP 2001-303251 (w/Eng. Abstract)	10/31/2001			Х			
	B53	JP 2001-284042 (w/Eng. Abstract)	10/12/2001	·		X			
	B54	JP 2001-254181 (w/Eng. Abstract)	09/18/2001			Х			
	B55	JP 2001-240972 (w/Eng. Abstract)	09/04/2001			X			

Examiner Date Considered

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Substitute	for form 1449A/PTO		, Y	Application Number	10/741,824	١
				Filing Date	DECEMBER 19, 2003	I
INFO	RMATION DISC	LOS	SURE	First Named Inventor	LING CHEN, ET AL.	I
STAT	TATEMENT BY APPLICANT		CANT	Group Art Unit	UNKNOWN	Ī
				Examiner Name	UNKNOWN	Ī
(Use as many sheets as necessary)				Attorney Docket Number	AMAT/7532/CPI/L/B/PJS ·	I
Sheet	12	of	30 ·	Submission Date		Ţ

		·	U.S. PATENT	DOCUMENTS	
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
Initials*	No. ¹	Number-Kind Code ^{2 (f known)}	MM-DD-YYYY	Applicant of Cited Document	
•	A199	US-6,042,652	03/28/2000	Hyun et al.	
	A200	US-6,037,664	03/14/2000	Zhao, et al.	
	A201	US-6,036,773	03/14/2000	Wang et al.	
	A202	US-6,025,627	02/15/2000	Forbes et al.	
	A203	US-6,020,243	02/01/2000	Wallace, et al.	
	A204	US-6,015,917	01/18/2000	Bhandari, et al.	
	A205	US-6,015,590	01/18/2000	Suntola et al.	
	A206	US-6,013,553	01/11/2000	Wallace, et al.	
	A207	US-6,001,669	12/14/1999	Gaines et al.	
	A208	US-5,972,430	10/26/1999	DiMeo, Jr. et al.	
	A209	US-5,947,710	09/07/1999	Cooper, et al.	
,	A210	US-5,942,040	08/24/1999	Kim et al.	
	A211	US-5,928,389	07/27/1999	Jevtic	
	A212	US-5,925,574	07/20/1999	Aoki et al.	*
	A213	US-5,923,985	07/13/1999	Aoki et al.	
	A214	US-5,923,056	07/13/1999	Lee et al.	
	A215	US-5,916,365	06/29/1999	Sherman	
•	A216	US-5,904,565	05/18/1999	Nguyen, et al.	

	FOREIGN PATENT DOCUMENTS							
Examiner	Cite	Foreign Patent Document	Publication Date		Pages, Columns, Lines,	T ⁶		
Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY		Where Relevant Passages or Relevant Figures Appear			
	B56	JP 2001-220294 (Eng. Abstract Only)	08/14/2001			Х		
	B57	JP 2001-220287 (Eng. Abstract Only)	08/14/2001			Х		
	B58	JP 2001-217206 (Eng. Abstract Only)	,08/10/2001			Х		
	B59	JP 2001-189312 (Eng. Abstract Only)	07/10/2001			Х		
·	B60	JP 2001-172767 (Eng. Abstract Only)	06/26/2001			Х		

Examiner Date Considered

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PTO/SB/08a (08-03)

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Sheet	13	of	30	Submission Date	

			U.S. PATENT	DOCUMENTS	· .	
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Initials*	No.¹	Number-Kind Code ^{2 (f known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	
	A217	US-5,882,413	03/16/1999	Beaulieu et al.		
	A218	US-5,882,165	03/16/1999	Maydan et al.		
,	A219	US-5,879,459	03/09/1999	Gadgil et al.		
	A220	US-5,866,795	02/02/1999	Wang et al.	-	
	A221	US-5,866,213	02/02/1999	Foster et al.		
	A222	US-5,858,102	01/12/1999	Tsai		
	A223	US-5,856,219	01/05/1999	Naito et al.		
•	A224	US-5,855,680	01/05/1999	Soininen et al.		
	A225	US-5,855,675	01/05/1999	Doering et al.		
	A226	US-5,851,849	12/22/1998	Comizzoli et al.	·	
	A227	US-5,835,677	11/10/1998	Li et al.	*	
	A228	US-5,830,270	11/03/1998	McKee et al.		
	A229	US-5,807,792	09/15/1998	Ilg et al.		
	A230	US-5,804,488	09/08/1998	Shih, et al.		
	A231	US-5,801,634	09/01/1998	Young et al.		
	A232	US-5,796,116	08/18/1998	Nakata et al.		
	A233	US-5,788,799	08/04/1998	Steger, et al.		
*	A234	US-5,788,447	08/04/1998	Yonemitsu et al.		

	_	FORE	IGN PATENT I	DOCUMENTS		•
Examiner	Cite	Foreign Patent Document	Publication Date	Applicant of Cited Document Where R	Pages, Columns, Lines,	T ⁶
Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY		Where Relevant Passages or Relevant Figures Appear	
	B61	JP 2001-152339 (Eng. Abstract Only)	06/05/2001			X
	B62	JP 2001-111000	04/20/2001			Х
	B63	JP 2001-020075 (Eng. Abstract Only)	01/23/2001			Х
	B64	JP 2000-353666 (Eng. Abstract Only)	12/19/2000			Х
	B65	JP 2000-340883 (Eng. Abstract Only)	12/08/2000			Х

Examiner Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the Emperor must precede the serial number of the patent document. sKind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid QMB control number. 10/741.824 Substitute for form 1449A/PTO Application Number Filing Date **DECEMBER 19, 2003** INFORMATION DISCLOSURE First Named Inventor LING CHEN, ET AL. STATEMENT BY APPLICANT Group Art Unit **UNKNOWN** UNKNOWN Examiner Name (Use as many sheets as necessary) Attorney Docket Number AMAT/7532/CPI/L/B/PJS Sheet 30 Submission Date

		,	U.S. PATENT	DOCUMENTS		
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	
Initials*	No. ¹	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	
	A235	US-5,749,974	05/12/1998	Habuka et al.		
	A236	US-5,747,113	05/05/1998	Tsai		
	A237	US-5,730,802	03/24/1998	Ishizumi et al.		
	A238	US-5,730,801	03/24/1998	Tepman et al.	* .	
	A239	US-5,711,811	01/27/1998	Suntola et al.	•	
	A240	US-5,707,880	01/13/1998	Aftergut et al.		
	A241	US-5,705,224	01/06/1998	Murota et al.		
	A242	US-5,695,564	12/09/1997	Imahashi		
	A243	US-5,693,139	12/02/1997	Nishizawa et al.		
	A244	US-5,674,786	10/07/1997	Turner et al.		
·	A245	US-5,667,592	09/16/1997	Boitnott et al.		
	A246	US-5,644,128	07/01/1997	Wollnik et al.		
	A247	US-5,641,984	06/24/1997	Aftergut et al.		
	A248	US-5,637,530	06/10/1997	Gaines et al.		
	A249	US-5,616,181	04/01/1997	Yamamoto et al.		
	A250	US-5,609,689	03/11/1997	Kato et al.	•	
	A251	US-5,601,651	02/11/1997	Watabe		
	A252	US-5,580,380	12/03/1996	Liu, et al.		

	FOREIGN PATENT DOCUMENTS								
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T ⁶			
Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear				
	B66	JP 2000-319772 (Eng. Abstract Only)	11/21/2000	- (1)	•	Х			
	B67	JP 2000-218445 (Eng. Abstract Only)	08/08/2000			Х			
	B68	JP 2000-138094 (Eng. Abstract Only)	05/16/2000			X.			
	B69	JP 2000-087029 (Eng. Abstract Only)	03/28/2000		·	Х			
	B70	JP 2000-068072 (Eng. Abstract Only)	03/03/2000			Х			

Examiner Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. sKind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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o a collection of information unless it displays a valid OMB control number. Under the Paperwork Reduction Act of 1995, no persons are required to respond 10/741,824 Application Number Substitute for form 1449A/PTO Filing Date . **DECEMBER 19, 2003** INFORMATION DISCLOSURE First Named Inventor LING CHEN, ET AL. STATEMENT BY APPLICANT Group Art Unit UNKNOWN **Examiner Name** UNKNOWN (Use as many sheets as necessary) AMAT/7532/CPI/L/B/PJS **Attorney Docket Number**

Submission Date

	· <u>- </u>		U.S. PATENT	DOCUMENTS	16
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No.¹	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
	A253	US-5,540,783	07/30/1996	Eres et al.	
	A254	US-5,532,511	07/02/1996	Nishizawa et al.	
<u> </u>	A255	US-5,527,733	06/18/1996	Nishizawa et al.	·
	A256	US-5,526,244	06/11/1996	Bishop	
*	A257	US-5,521,126	05/28/1996	Okamura et al.	
	A258	US-5,503,875	04/02/1996	Imai et al.	
	A259	US-5,484,664	01/16/1996	Kitahara et al.	
	A260	US-5,483,919	01/16/1996	Yokoyama et al.	
	A261	US-5,480,818	01/02/1996	Matsumoto et al.	
	A262	US-5,469,806	11/28/1995	Mochizuki et al.	
	A263	US-5,458,084	10/17/1995	Thorne et al.	
	A264	US-5,455,072	10/03/1995	Bension et al.	
	A265	US-5,443,647	08/22/1995	Aucoin et al.	
	A266	US-5,443,033	08/22/1995	Nishizawa et al.	
	A267	US-5,441,703	08/15/1995	Jurgensen	
**	A268	US-5,439,876	08/08/1995	Graf et al.	
	A269	US-5,438,952	08/08/1995	Otsuka	
	A270	US-5,395,791	03/07/1995	Cheng et al.	

	Cite No.1 Foreign Patent Document Publication Date MM-DD-YYYY Name of Patentee or Applicant of Cited Document Plus Publication Date MM-DD-YYYY Applicant of Cited Document Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear X				
Examiner		Foreign Patent Document	Publication Date	Name of Patentee or	T ⁶
Initials*	No.	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	
	B71	JP 2000-058777 (Eng. Abstract Only)	02/25/2000		Х
	B72	JP 2000-031387 (Eng. Abstract Only)	01/28/2000		Х
	B73	JP 11-269652 (Eng. Abstract Only)	10/05/1999		Х
	B74	JP 10-308283	11/17/1998		Х
	B75	JP 10-190128 (Eng. Abstract Only)	07/21/1998		Х

Examiner Date Considered

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. 10/741,824 Application Number Substitute for form 1449A/PTO **DECEMBER 19, 2003** Filing Date INFORMATION DISCLOSURE First Named Inventor LING CHEN, ET AL. STATEMENT BY APPLICANT Group Art Unit UNKNOWN **Examiner Name** UNKNOWN (Use as many sheets as necessary) Attorney Docket Number AMAT/7532/CPI/L/B/PJS

Submission Date

			U.S. PATENT	DOCUMENTS	
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No. ¹	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
	A271	US-5,374,570	12/20/1994	Nasu et al.	
	A272	US-5,348,911	09/20/1994	Jurgensen et al.	
	A273	US-5,338,389	08/16/1994	Nishizawa et al.	
	A274	US-5,336,324	08/09/1994	Stall et al.	
	A275	US-5,330,610	07/19/1994	Eres et al.	
	A276	US-5,316,793	05/31/1994	Wallace et al.	
	A277	US-5,316,615	05/31/1994	Copel	
	A278	US-5,311,055	05/10/1994	Goodman et al.	•
	A279	US-5,306,666	04/26/1994	Izumi	
	A280	US-5,300,186	04/05/1994	Kitahara et al.	
	A281	US-5,296,403	03/22/1994	Nishizawa et al.	
	A282	US-5,294,286	03/15/1994	Nishizawa et al.	
, ,	A283	US-5,290,748	03/01/1994	Knuuttila et al.	
	A284	US-5,290,609	03/01/1994	Horiike, et al.	
	A285	US-5,286,296	02/15/1994	Sato et al.	
	A286	US-5,281,274	01/25/1994	Yoder	·
-	A287	US-5,278,435	01/11/1994	Van Hove et al.	
	A288	US-5,270,247	12/14/1993	Sakuma et al.	

		FORE	IGN PATENT (DOCUMENTS		
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T ⁶
Initials*	No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	
	B76	JP 10-188840 (Eng. Abstract Only)	07/21/1998		·	Х
	B77	JP 09-293681 (Eng. Abstract Only)	11/11/1997	·		Х
	B78	JP 09-260786 (Eng. Abstract Only)	10/03/1997			X
	B79	JP 08-264530	10/11/1996		·	
	B80	JP 08-245291 (Eng. Abstract Only) /	09/24/1996			Х

Examiner Date Considered

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Substitute	e for form 1449A/PTO			Application Number	10/741,824	1
	•			Filing Date	DECEMBER 19, 2003	T
INFO	RMATION DISC	CLOS	SURE	First Named Inventor	LING CHEN, ET AL.	1
STA	TEMENT BY AP	PLIC	CANT	Group Art Unit	UNKNOWN	7
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Sheet	17	of	30	Submission Date		J

		•	U.S. PATENT	DOCUMENTS	
Examiner	Cite No.1	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No.	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
-	A289	US-5,259,881	11/09/1993	Edwards, et al.	
	A290	US-5,256,244	10/26/1993	Ackerman	
-	A291	US-5,254,207	10/19/1993	Nishizawa et al.	
•	A292	US-5,250,148	10/05/1993	Nishizawa et al.	
	A293	US-5,246,536	09/21/1993	Nishizawa et al.	
•	A294	US-5,234,561	08/10/1993	Randhawa et al.	
	A295	US-5,225,366	07/06/1993	Yoder	
	A296	US-5,205,077	04/27/1993	Wittstock	
-	A297	US-5,186,718	02/16/1993	Tepman et al.	
	A298	US-5,173,474	12/22/1992	Connell, et al.	·
	A299	US-5,166,092	11/24/1992	Mochizuki et al.	
	A300	US-5,130,269	07/14/1992	Kitahara et al.	
	A301	US-5,091,320	02/25/1992	Aspnes et al.	
	A302	US-5,085,885	02/04/1992	Foley et al.	
	A303	US-5,082,798	01/21/1992	Arimoto	
	A304	US-5,028,565	07/02/1991	Chang, et al.	
*	A305	US-5,013,683	05/07/1991	Petroff et al.	
	A306	US-5,000,113	03/19/1991	Wang et al.	·

		FORE	IGN PATENT I	DOCUMENTS		
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T ₆
Initials*	No.	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	
	B81	JP 08-181076 (Eng. Abstract Only) 🗸	· 07/12/1996			Х
	B82	JP 07-086269 (Eng. Abstract Only)	03/13/1995			Х
	B83	JP 07-070752 (Eng. Abstract Only)	03/14/1995			Х
	B84	JP 06-291048	10/18/1994			
	B85	JP 06-252057 (Eng. Abstract Only) √	09/09/1994			X

Examiner **Date Considered**

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	INFO	RMATION DISC	CLOS	SURE	First Named Inventor	LING CHEN, ET AL.	
	STAT	TEMENT BY AP	PLIC	CANT	Group Art Unit	UNKNOWN	
					Examiner Name	UNKNOWN	
	(Use as many sheets as necessary))	Attorney Docket Number	AMAT/7532/CPI/L/B/PJS	
	Sheet	18	of	30	Submission Date		フ

			U.S. PATENT	DOCUMENTS	
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No. ¹	Number-Kind Code ^{2 (# known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
	A289	US-5,259,881	11/09/1993	Edwards, et al.	
	A290	US-5,256,244	10/26/1993	Ackerman	
	A291	US-5,254,207	10/19/1993	Nishizawa et al.	· ·
	A292	US-5,250,148	10/05/1993	Nishizawa et al.	
	A293	US-5,246,536	09/21/1993	Nishizawa et al.	·
· · · · · · · · · · · · · · · · · · ·	A294	US-5,234,561	08/10/1993	Randhawa et al.	
	A295	US-5,225,366	07/06/1993	Yoder	
	A296	US-5,205,077	04/27/1993	Wittstock	
	A297	US-5,186,718	02/16/1993	Tepman et al.	
	A298	US-5,173,474	12/22/1992	Connell, et al.	
	A299	US-5,166,092	11/24/1992	Mochizuki et al.	
	A300	US-5,130,269	07/14/1992	Kitahara et al.	
	A301	US-5,091,320	02/25/1992	Aspnes et al.	
	A302	US-5,085,885	02/04/1992	Foley et al.	
	A303	US-5,082,798	01/21/1992	Arimoto	
	A304	US-5,028,565	07/02/1991	Chang, et al.	
	A305	US-5,013,683	05/07/1991	Petroff et al.	
	A306	US-5,000,113	03/19/1991	Wang et al.	

		FORE	IGN PATENT I	DOCUMENTS		
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T ⁶
Initials*	. No.¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	
	B86	JP 06-230421 (Eng. Abstract Only) V	08/19/1994			Х
	B87	JP 06-224138 (Eng. Abstract Only)	08/12/1994			X
	B88	JP 06-222388 (Eng. Abstract Only)	08/12/1994			Х
	B89	JP 06-196809 (Eng. Abstract Only)	07/15/1994			Х
	B90	JP 07-300649 (w/Eng. Abstract)	11/14/1995			X

Examiner **Date Considered**

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. 10/741,824 Application Number Substitute for form 1449A/PTO **DECEMBER 19, 2003** Filing Date INFORMATION DISCLOSURE First Named Inventor LING CHEN, ET AL. STATEMENT BY APPLICANT Group Art Unit UNKNOWN UNKNOWN **Examiner Name** (Use as many sheets as necessary) AMAT/7532/CPI/L/B/PJS Attorney Docket Number Sheet 30 · **Submission Date**

	Base December De					
Examiner Initials*		Country Code ³ -Number ⁴ -Kind Code ⁵ (if	1		Where Relevant Passages or	T ⁶
	B91		06/24/1994			X
	B92		05/13/1994			<u> </u>
			,			X
	B94	JP 05-343685 (Eng. Abstract Only)	12/24/1993			X
	B95		12/24/1993			X
	B96	ļ <u>.</u>				X
	B97		,			Х
	B98	 	7	· · · · · · · · · · · · · · · · · · ·		Х
	B99	JP 05-270997 (Eng. Abstract Only)	10/19/1993			Х
	B100	JP 05-251339 (Eng. Abstract Only)	09/28/1993			X
	B101	JP 05-235047 (Eng. Abstract Only)	09/10/1993			Х
	B102	JP 05-234899 (Eng. Abstract Only)/	09/10/1993			Х
	B103	JP 05-206036 (Eng. Abstract Only)	08/13/1993			Х
	B104	JP 05-186295 (Eng. Abstract Only)/	07/27/1993			Х
	B105	JP 05-182906 (Eng. Abstract Only)	07/23/1993			Х
	B106	JP 05-175145 (Eng. Abstract Only)	07/13/1993			Х
	B107	JP 05-175143 (Eng. Abstract Only)	07/13/1993			ιX
•	B108	JP 05-160152 (Eng. Abstract Only)	06/25/1993			Х
	B109	JP 05-102189 (Eng. Abstract Only)	04/23/1993			Х
	B110 .	JP 05-074724 (Eng. Abstract Only)	03/26/1993			X
	B110	JP 05-074717 (Eng. Abstract Only)	03/26/1993			X
	B112	JP 05-047668 (Eng. Abstract Only)	/02/26/1993			Х
	B113	JP 05-047666 (Eng. Abstract Only)	/02/26/1993			X
	B114	JP 05-047665 (Eng. Abstract Only)	02/26/1993		·	Х
	B115	JP 05-029228 (Eng. Abstract Only)	02/05/1993			Х
	B116	JP 04-328874 (Eng. Abstract Only)	11/17/1992			Х
	B117	JP 04-325500 (Eng. Abstract Only)	, 11/13/1992			Х
	B118 ·	JP 04-291916 (Eng. Abstract Only)	10/16/1992			Х

Examiner Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant: a Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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Submission Date

		FORE	IGN PATENT I	DOCUMENTS		٠.
Examiner Initials*	Cite No.1	Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁵ (if	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T [€]
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	B119	JP 04-285167 (Eng. Abstract Only)				X
	B120	JP 04-273120 (Eng. Abstract Only)	09/29/1992			
	B122	JP 04-260696 (Eng. Abstract Only)	09/16/1992			X
	B123	JP 04-212411 (Eng. Abstract Only)	08/04/1992			X
	B124	JP 04-186824 (Eng. Abstract Only)	07/03/1992			X
	B125	JP 04-175299 (Eng. Abstract Only)/	06/23/1992			Х
	B126	JP 04-162418 (Eng. Abstract Only)	06/05/1992			X
	B127	JP 04-132681 (Eng. Abstract Only)	05/061992			X
	B128	JP 04-132214 (Eng. Abstract Only)	05/06/1992			X
	B129	JP 04-111418 (Eng. Abstract Only)	04/13/1992			X
	B130	JP 04-100292 (Eng. Abstract Only)	/ 04/02/1992			×
	B131	JP 04-031396 (w/Eng. Abstract)	02/03/1992			×
	B132	JP 04-031391 (Eng. Abstract Only)	02/03/1992			X
	B133	JP 04-151822 (Eng. Abstract Only)	05/25/1992			X
	B134	JP 03-286531	12/17/1991			
	B135	JP 03-286522 (Eng. Abstract Only)	Á2/17/1991			X
	B136	JP 03-234025 (Eng. Abstract Only)	10/18/1991			X
	B137	JP 03-208885 (Eng. Abstract Only)	09/12/1991			Х
· · · · · · · · · · · · · · · · · · ·	B138	JP 03-185716 (Eng. Abstract Only) *	08/13/1991			X
	B139	JP 03-070124 (Eng. Abstract Only)	03/26/1991			X
	B140	JP 03-048421	03/01/1991	*		1
	B141	JP 03-044967 (Eng. Abstract Only)	02/26/1991			×
	B142	JP 03-023299 (Eng. Abstract Only)	01/31/1991			×
	B143	JP 03-023294 (Eng. Abstract Only)	01/31/1991			×
	B144	JP 03-022569 (Eng. Abstract Only)	01/30/1991	,		×
	B145	JP 03-019211 (Eng. Abstract Only) •	01/28/1991		7	×
	B146	JP 02-304916 (Eng. Abstract Only)/	12/18/1990			×
	B147	JP 02-283084 (Eng. Abstract Only)	11/20/1990			×

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PTO/SB/08a (08-03)

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. 10/741,824 Substitute for form 1449A/PTO **Application Number** Filing Date **DECEMBER 19, 2003** INFORMATION DISCLOSURE First Named Inventor LING CHEN, ET AL. STATEMENT BY APPLICANT Group Art Unit **UNKNOWN Examiner Name** UNKNOWN (Use as many sheets as necessary) Attorney Docket Number AMAT/7532/CPI/L/B/PJS Sheet Submission Date

		FORE	IGN PATENT I	DOCUMENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	B148	JP 02-264491 (Eng. Abstract Only)	10/29/1990		-	Х
	B149	JP 02-246161 (Eng. Abstract Only)	10/01/1990		<i>b</i> •	Х
	B150	JP 02-230722 (Eng. Abstract Only)	09/13/1990		·	Х
	B151	JP 02-230690 (Eng. Abstract Only)	09/13/1990			Х
	B152	JP 02-203517 (Eng. Abstract Only)	08/13/1990			Х
	B153	JP 02-196092 (Eng. Abstract Only)	08/02/1990			X
	B154	JP 02-172895 (Eng. Abstract Only),	07/04/1990			Х
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	B156	JP 02-129913 (Eng. Abstract Only)	05/18/1990			Х
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	B158	JP 02-074587 (Eng. Abstract Only)	03/14/1990			Х
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	B160	JP 02-063115 (Eng. Abstract Only)	03/02/1990			Х
	B161	JP 02-017634 (Eng. Abstract Only)	01/22/1990			Х
-	B162	JP 02-014513 (Eng. Abstract Only).	01/18/1990			Х
	B163	JP 02-012814 (Eng. Abstract Only)	01/17/1990			Х
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	B165	JP 01-305894 (Eng. Abstract Only)*	12/11/1989	-		Х
	B166	JP 01-303770 (Eng. Abstract Only)	12/07/1989			Х
	B167	JP 01-296673 (Eng. Abstract Only),	11/30/1989	·		X
	. B168	JP 01-290222 (Eng. Abstract Only)	11/22/1989			Х
	B169	JP 01-290221 (Eng. Abstract Only)	11/22/1989			. X
	B170	JP 01-272108 (Eng. Abstract Only)	10/31/1989			Х
	B171	JP 01-270593 (Eng. Abstract Only)	10/27/1989		• •	Х
	B172	JP 01-264218 (Eng. Abstract Only)	10/20/1989			Х
	B173	JP 01-245512 (Eng. Abstract Only)	09/29/1989			Х
	B174	JP 01-236657 (Eng. Abstract Only)	09/21/1989			Х
	B175 ·	JP 01-154511 (Eng. Abstract Only)	06/16/1989			Х

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Substitute	for form 1449A/PTO			Application Number	10/741,824
				Filing Date	DECEMBER 19, 2003
INFO	RMATION DISC	LOS	SURE	First Named Inventor	LING CHEN, ET AL.
STAT	EMENT BY AP	PLIC	CANT	Group Art Unit	UNKNOWN
				Examiner Name	UNKNOWN
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Sheet	23	of	30	Submission Date	

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	B176	JP 01-143233 (Eng. Abstract Only),	06/05/1989			X
	B177	JP 01-143221 (w/Eng. Abstract) 🖌	06/05/1989		•	X
-	B178	JP 01-117017 (w/Eng. Abstract) 🔏	05/09/1989	·	·	X
***	B179 ·	JP 01-103996 (Eng. Abstract Only),	04/21/1989			X
	B180	JP 01-103982 (Eng. Abstract Only)*	04/21/1989	. ,		X
	B181	WO 99/13504 · ~	03/18/1999			
	B182	WO 99/41423	08/19/1999			
	B183	WO 99/29924	06/17/1999			
	B184	WO 98/51838	11/19/1998			
	B185	WO 98/06889	02/19/1998			
	B186	WO 96/18756 •	06/20/1996			
	B187	WO 96/17107	06/06/1996			
	B188	WO 93/02111	02/04/1993			
· · · · · · · · · · · · · · · · · · ·	B189	WO 91/10510	07/25/1991			
	B190	WO 90/02216	03/08/1990			
	B191	WO 02/43115 A2	05/30/2002			
	B192	WO 02/27063 A2	04/04/2002			Γ
٠	B193	WO 02/09167 A2	01/31/2002			
	B194	WO 01/82390 A1 +	11/01/2001			
	B195	WO 01/66832 A2	09/13/2001		·	
	B196	WO 01/40541 A1	06/07/2001			
	B197	WO 01/36702 A1 *	05/25/2001			
	B198	WO 01/29893 A1 ,	04/26/2001			
	B199	WO 01/29891 A1 .	04/26/2001			
	B200	WO 01/25502 A1 •	04/12/2001			
	B201	WO 01/17692 A1 •	03/15/2001			
	B202	WO 01/15220 •	03/01/2001			
	B203	WO 01/29280 A1	04/26/2001			

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				Filing Date	DECEMBER 19, 2003
INFO	RMATION DISC	LOS	SURE	First Named Inventor	LING CHEN, ET AL.
STAT	TEMENT BY AP	PLIC	CANT	Group Art Unit	UNKNOWN
				Examiner Name	UNKNOWN
	(Use as many sheets as ned	essary)	Attorney Docket Number	AMAT/7532/CPI/L/B/PJS
Sheet	24	of	30	Submission Date	

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Initials*	No.'	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	
	B204	WO 01/27347 A1 /	04/19/2001			
	B205	WO 01/27346 A1 /	04/19/2001			
	B206	WO 01/15220 A1 ~	03/01/2001			
	B207	WO 00/70674 /	11/23/2000			
	B208	WO 00/11721	03/02/2000	_	·	
	B209	WO 00/79576 A1	12/28/2000			
	B210	WO 00/79019 A1 🗸	12/28/2000			
	B211	WO 00/63957 A1 /.	10/26/2000			
	B212	WO 00/54320A1 /	09/14/2000			
	B213	WO 00/16377 A2	03/23/2000			
	B214	WO 00/15881 A2 /	03/23/2000			
	B215	WO 00/15865 A1 /	03/23/2000			
	B216	WO 02/45871 A1 🗸	06/13/2002			
	B217	WO 02/45167 A2	06/06/2002			
	B218	WO 02/01628 A2 🗸	01/03/2002			
-	B219	WO 02/67319 A2 /	08/29/2002			
	B220	WO 98/51838 A1 /	11/19/1998			
	B221	JP 2000-178735 (w/Eng. Abstract)	06/27/2000			X
	B222	WO 99/01595 A1 /	01/14/1999		*	
	B223	WO 96/17107 A1 √	06/06/1996	,		
	B224	WO 02/08485 A2 /	01/31/2002			
	B225	WO 99/65064 A1 /	12/16/1999			
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Date Considered Examiner

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Submission Date

		NON PATENT LITERATURE DOCUMENTS	٠.
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T²
	C1 /	OHBA, ET AL., "Thermal Decomposition of Methylhydrazine and Deposition Properties of CVD TiN Thin Films", Conference Proceedings, Advanced Metallization for ULSI Applications in 1993 (1994), pp. 143-149.	
	C2	SCHEPER, ET AL.,"Low-temperature deposition of titanium nitride films from dialkylhydrazine-based precursors", Materials Science in Semiconductor Processing 2 (1999), pp. 149-157.	
	C3	SUZUKI, ET AL., "A 0.2-µm contact filing by 450°C-hydrazine-reduced TiN film with low resistivity", IEDM 92-979, pp. 11.8.1 – 11.8.3.	
	C4	SUZUKI, ET AL., "LPCVD-TiN Using Hydrazine and TiCl ₄ ", VMIC Conference (June 8-9, 1993), pp. 418-423.	
	C5	IBM Tech. Disc. Bull. "Knowledge-Based Dynamic Scheduler in Distributed Computer Control, (June 1990), pp. 80-84.	
	C6	IBM Tech. Disc. Bull. "Multiprocessor and Multitasking Architecture for Tool Control of the Advanced via Inspection Tools" (May 1992), pp. 190-191.	
	C7	MCGEACHIN, S., "Synthesis and properties of some β-diketimines derived from acetylacetone, and their metal complexes", Canadian J. of Chemistry, Vol. 46 (1968), pp.1903-1912.	
	C8	SOLANKI, ET AL., "Atomic Layer deposition of Copper Seed Layers", Electrochemical and Solid State Letters, 3(10) (2000), pp. 479-480.	
	C9	YANG, ET AL. "Atomic Layer Deposition of Tungsten Film from WF6/B2H6:Nucleation Layer for Advanced Semiconductor Device," Conference Proceedings ULSI XVII (2002) Materials Research Society.	
	C10	KUKLI, ET AL. "Tailoring the Dielectric Properties of HfO ₂ -Ta ₂ -O ₅ Nanolaminates," Applied Physics Letters, Vol. 68, No. 26, June 24, 1996; pp. 3737-9.	
	C11	KUKLI, ET AL. "Atomic Layer Epitaxy Growth of Tantalum Oxide Thin Films from Ta(OC₂H₅)5 and H₂O," Journal of the Electrochemical Society, Vo. 142, No. 5, May 1995: pp. 1670-5.	
	C12	KUKLI, ET AL. "Properties of Ta ₂ O ₅ -Based Dielectric Nanolaminates Deposited by Atomic Layer Epitaxy," Journal of Electrochemical Society, Vol. 144, No. 1, Jan. 1997; pp. 300-6.	

Examiner Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. 10/741.824 **Application Number** Substitute for form 1449B/PTO Filing Date **DECEMBER 19, 2003** INFORMATION DISCLOSURE First Named Inventor LING CHEN, ET AL. STATEMENT BY APPLICANT Group Art Unit **UNKNOWN Examiner Name** UNKNOWN (Use as many sheets as necessary) AMAT/7532/CPI/L/B/PJS **Attorney Docket Number**

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*		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
· ·	C13	KUKLI, ET AL. "In Situ Study of Atomic Layer Epitaxy Growth on Tantalum Oxide Thin Films form Ta(OC₂H₅)₅ and H₂O," Applied Surface Science, Vol. 112, March 1997, pp. 236-42.	
	C14	KUKLI, ET AL. "Properties of {Nb _{1-x} Ta _x } ₂ O ₅ Solid Solutions and {Nb _{1-x} Ta _x } ₂ O ₅ .Z _r O ₂ Nanolaminates Grown by Atomic Layer Epitaxy," 1997; p. 785-93.	
	C15	EISENBRAUM, ET AL. "Atomic Layer Deposition (ALD) of Tantalum-based Materials for Zero Thickness Copper Barrier Applications," Proceedings of the IEEE 2001 International Interconnect Technology Conference 2001.	•
	C16	CLARK-PHELPS, ET AL. "Engineered Tantalum Aluminate and Hafnium Aluminate ALD Films for Ultrathin Dilectric Films with Improved Electrical and Thermal Properties," Mat. Res. Soc. Symp. Proc. Vol. 670 (2001).	
	C17	ROSSNAGEL, ET AL. "Plasma-enhanced Atomic Layer Deposition of Ta and Ti for Interconnect Diffusion Barriers," J. Vacuum Sci. & Tech. B., Vol. 18, No. 4 (July 2000), pp. 2016-20.	
	C18	BADER, ET AL., "Integrated Processing Equipment", Solid State Technology, Cowan Pub., Vol. 33, No. 5 (May 1, 1990), pp. 149-154.	
	C19	CHOI, ET AL., "The effect of annealing on resistivity of low pressure chemical vapor depositied titanium diboride", J. Appl. Phys. 69(11) (June 1, 1991), pp. 7853-7861	
	C20	CHOI, ET AL., "Stability of TiB ₂ as a Diffusion Barrier on Silicon", J. Electrochem. Soc. 138(10) (October 1991), pp. 3062-3067.	
	C21	DAN MAYDAN, "Cluster Tools for Fabrication of Advanced Devices" Jap. J. of Applied Physics, Extended Abstracts, 22 nd Conference Solid State Devices and Materials (1990), pp. 849 – 852.	
	C22	KATHERINE DERBYSHIRE "Applications of Integrated Processing", Solid State Technology, US, Cowan Pub., Vol 37, No. 12 (December 1, 1994), pp. 45-47	
	C23	KITIGAWA, ET AL., "Hydrogen-mediated low temperature epitaxy of Si in plasma- enhanced chemical vapor deposition", Applied Surface Science (2000), pp. 30-34	
	C24	J.W. KLAUS, ET AL., "Atomically controlled growth of tungsten and tungsten nitride using sequential surface reactions", Applied Surface Science 162-163, 2000, pp. 479-491.	

Examiner		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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Application Number

Application Number

Filing Date

First Named Inventor

LING CHEN, ET AL.

STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 27 of 30

Application Number	10/741,824
Filing Date	DECEMBER 19, 2003
First Named Inventor	LING CHEN, ET AL.
Group Art Unit	UNKNOWN
Examiner Name	UNKNOWN
Attorney Docket Number	AMAT/7532/CPI/L/B/PJS
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		NON PATENT LITERATURE DOCUMENTS	
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	C25	M. RITALA, ET AL., "Perfectly Conformal TiN and Al ₂ O ₃ Films Deposited by Atomic Layer Deposition", Chemical Vapor Deposition, ISSN 0948-1907, CVDEFX, Vol. 5, January 1999, No.1, pgs 7-9.	
	C26	L. NIINISTO, ET AL., "Synthesis of oxide thin films and overlayers by atomic layer epitaxy for advanced applications", Materials Science and Engineering B41, 1996, pgs 23-29.	
	C27	M. BALOG, ET AL., "Chemical Vapor Deposition and Characterization of HfO ₂ Films From Organo-Hafnium Compounds", Thin Solid Films, 41, 1977, pgs 247-259.	
	C28	Y. OHSHITA, ET AL., "HfO ₂ growth by low=pressure chemical vapor deposition using the Hf(N(C ₂ H ₅) ₂) ₄ /O ₂ gas system", Journal of Crystal Growth 233, 2001, pgs 292-297.	-
	C29	LEE, ET AL., "Pulsed nucleation for ultra-high aspect ratio tungsten plugfill", Novellus Systems, Inc. (2001), pp. 1-2.	
	C30	MIKKO RITALA, ET AL. "Development of Crystallinity and Morphology in Hafnium Dioxide Thin Films Grown by Atomic Layer Epitaxy", 1994 Thin Solid Films, 250 Pages 72-80.	
	C31	MIKKO RITALA, "Thesis. Ann. Acad. Sci. Fenn. Ser. All" Chemica, 257, May 1994 Pages 1-48.	•
	C32	PCT International Search Report for PCT/US02/28884, September 23, 2003 (AMAT/5350.PC).	
	C33	HULTMAN, ET AL., "Review of the thermal and mechanical stability of TiN-based thin films", <i>Zeitschrift Fur Metallkunde</i> , 90(10) (Oct. 1999), pp. 803-813.	
	C34	KLAUS, ET AL., "Atomic Layer Deposition of SiO ₂ Using Catalyzed and Uncatalyzed Self- Limiting Surface Reactions", <i>Surface Review & Letters</i> , 6(3&4) (1999), pp. 435-448.	
	C35	YAMAGUCHI, ET AL., "Atomic-layer chemical-vapor-deposition of silicon dioxide films with extremely low hydrogen content", <i>Appl. Surf. Sci.</i> , Vol. 130-132 (1998), pp. 202-207.	_
	C36	GEORGE, ET AL., "Surface Chemistry for Atomic Layer Growth", <i>J. Phys. Chem.</i> , Vol. 100 (1996), pp. 13121-131.	

Examiner Date Considered

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

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Sheet 28 of 30 Submission Date AMAT/7532/CPI/L/B/PJS

•		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	C37	GEORGE, ET AL., "Atomic layer controlled deposition of SiO ₂ and Al ₂ O ₃ using ABABbinary reaction sequence chemistry", <i>Appl. Surf. Sci.</i> , Vol. 82/83 (1994), pp. 460-467.	
	C38	WISE, ET AL., "Diethyldiethoxysilane as a new precursor for SiO ₂ growth on silicon", <i>Mat. Res. Soc. Symp. Proc.</i> , Vol. 334 (1994), pp. 37-43.	
	C39	NIINISTO, ET AL., "Synthesis of oxide thin films and overlayers by atomic layer epitaxy for advanced applications", <i>Mat. Sci. & Eng.</i> , Vol. B41 (1996), pp. 23-29.	-
	C40	MIN, ET AL., "Atomic layer deposition of TiN thin films by sequential introduction of Ti precursor and NH/sub3/", Symp.: Advanced Interconnects and Contact Materials and Processes for Future Integrated Circuits (Apr. 13-16, 1998), pp. 337-342.	
*	C41	MIN, ET AL., "Metal-Organic Atomic-Layer Deposition of Titanium-Silicon-Nitride Films", Applied Physics Letters, American Inst. Of Physics, Vol 75(11) (Sept. 13, 1999).	
	C42	MARTENSSON, ET AL., "Atomic Layer Epitaxy of Copper on Tantalum", Chemical Vapor Deposition, 3(1) (Feb. 1, 1997), pp. 45-50.	
	C43	RITALA, ET AL. "Atomic Layer Epitaxy Growth of TiN Thin Films", <i>J. Electrochem. Soc.</i> , 142(8) (Aug. 1995), pp. 2731-737.	
	C44	ELERS, ET AL., "NbC15 As A Precursor In Atomic Layer Epitaxy", Appl. Surf. Sci., Vol. 82/83 (1994), pp. 468-474.	
	C45	LEE, "The Preparation of Titanium-Based Thin Film by CVD Using Titanium Chlorides as precursors", Chemical Vapor Deposition, 5(2) (Mar. 1999), pp. 69-73.	
	C46	MARTENSSON, ET AL., "Atomic Layer Epitaxy of Copper, Growth & Selectivity in the Cu (II)-2,2.6,6-Tetramethyl-3, 5-Heptanedion ATE/H2 Process", <i>J. Electrochem. Soc.</i> ,145(8) (Aug. 1998), pp. 2926-2931.	
,	C47	MIN, ET AL,"Chemical Vapor Deposition of Ti-Si-N Films with Alternating Source Supply", Mat., Res. Soc. Symp. Proc., Vol. 564 (Apr. 5, 1999), pp. 207-210.	·
	C48	BEDAIR, "Atomic Layer Epitaxy Deposition Processes", J. Vac. Sci. Techol. 12(1) (Jan/Feb 1994).	

Examiner Date Considered

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		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
*	C49	YAMAGA, ET AL., "Atomic Layer Epitaxy Of ZnS By A New Gas Supplying System In A Low-Pressure Metalorganic Vapor Phase Epitaxy", <i>J. of Crystal Growth</i> 117 (1992), pp. 152-155.	
	C50	United States Patent Application 10/762,764 filed January 22, 2004 (AMAT/4714.C1).	
	C51	United States Patent Application 10/418,728 filed April 18, 2003 (AMAT/4714.P2).	
	C53	United States Patent Application 09/678,266 filed October 3, 2000 (AMAT/4714.P1).	
	C53	United States Patent Application 09/625,336 filed July 25, 2000 (AMAT/4714.D1).	
	C54	RITALA, ET AL. "Surface Roughness Reduction in Atomic Layer Epitaxy Growth of Titanium Dioxide Thin Films," Thin Solid-Films, Vol. 249 No. 2 September 15, 1994, pp. 155-62.	
	C55	RITALA, ET AL. "Atomic Force Microscopy Study of Titanium Dioxide Thin Films Grown by Atomic Layer Epitaxy," Thin Solid Films, Vol. 228, No. 1-2 May 15, 1993, pp. 32-35.	
	C56	RITALA, ET AL. "Growth of Titanium Dioxide Thin Films by Atomic Layer Epitaxy," Thin Solid Films, Vo. 225, No. 1-2 March 25, 1993, p. 288-95.	
	C57	RITALA, ET AL. "Effects of Intermediate Zinc Pulses on Properties on TiN and NbN Films by Atomic Layer Epitaxy," Applied Surface Science, Vo. 120, No. 3-4 December 1997, pp. 199-212.	
	C58	RITALA, ET AL. "Atomic Layer Epitaxy Growth of TiN Thin Films from Til ₄ and NH ₃ ," Journal Electrochemical Society, Vol. 145, No. 8 August 1998, pp. 2914-20.	
	C59	MARTENSSON, ET AL. "Use of Atomic Layer Epitaxy for Fabrication of Si/TiN/Cu Structures," Journal Vacuum Science and Technology B, Vol. 17, No. 5 September 1999, pp. 2122-2128.	
:	C60	Proceedings of the ICEEE 1998 International Interconnect Technology Conference – San Francisco, California, June 1-3, 1998.	

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	C61	HWANG, ET AL. "Nanometer-Size α-PbO ₂ -type TiO ₂ in Garnet: A Thermobarometer for Ultrahigh-Pressure Metamorphism," Science Vol. 288 April 14, 2000.					
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U.S. PATENT DOCUMENTS								
Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear			
		Number-Kind Code ^{2 (if known)}						
	A307	US-4,993,357	02/19/1991	Scholz				
*	A308	US-4,975,252	12/04/1990	Nishizawa et al.				
	A309	US-4,960,720	10/02/1990	Shimbo				
<u> </u>	A310	US-4,951,601	08/28/1990	Maydan, et al.				
	A311	US-4,931,132	06/05/1990	Aspnes et al.				
	A312	US-4,927,670	05/22/1990	Erbil				
	A313	US-4,917,556	04/17/1990	Stark et al.				
	A314	US-4,876,218	10/24/1989	Pessa et al.				
	A315	US-4,861,417	08/29/1989	Mochizuki et al.				
	A316	US-4,859,627	08/22/1989	Sunakawa				
	A317	US-4,859,625	08/22/1989	Nishizawa et al.				
	A318	US-4,845,049	07/04/1989	Sunakawa .				
	A319	US-4,840,921	06/20/1989	Matsumoto				
	A320	US-4,838,993	06/13/1989	Aoki et al.				
	A321	US-4,838,983	06/13/1989	Schumaker et al.				
	A322	US-4,834,831	05/30/1989	Nishizawa et al.				
	A323	U\$-4,829,022	05/09/1989	Kobayashi et al.				
	A324	US-4,813,846	03/21/1989	Helms				
	A325	US-4,806,321	02/21/1989	Nishizawa et al.				
	A326	US-4,767,494	08/30/1988	Kobayashi et al.				
	A327	US-4,486,487	12/04/1984	Skarp	·			
	A328	US-4,413,022	11/01/1983	Suntola et al.				
	A329	US-4,389,973	06/28/1983	Suntola et al.				
	A330	US-4,058,430	11/15/1977	Suntola et al.				

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